

Descriptions of New Genera and Species of Hymenoptera from India.

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(Continuation.)

The keel bounding the areola and the basal areae united to it is roundly narrowed in the middle, the two united forming one area, contracted in the middle; the keel bounding the apex of the lateral areae is received close to the apex of the areola. The antennae are annulated with white. The post-petiole is dilated and clearly separated; the wings are hyaline or only slightly infuscated; the colour of the body is blue or dark blue. The genus has some affinity with *Lareiga*; that genus may be known from it by the spined median segment, by the abdomen being neither punctured nor striated and by the areola with the basal area not being narrowed in the centre. *)

To this genus belongs „*Ichneumon*“ *Goodwin-Austini* Cam.

1. *C. rufo-femorata*, sp. nov. ♀. *Nigra, abdominis apice coeruleo; orbitis oculorum, linea pronoti annuloque antennarum flavis; femoribus posticis rufis, alis hyalinis, stigmatate nervisque nigris.* — Long. 14 mm.

H a b. Simla (Nurse).

Head black, except for a white line on the outer orbits, opposite the front and another in the middle behind. Face and vertex rather strongly punctured; the punctures on the clypeus are larger, deeper and more widely separated; and it is covered thickly with white pubescence; its sides are pale testaceous; the foveae are large. Face roundly raised in the middle. Mandibles black, shining; the base closely, the middle more sparsely, punctured; the labial palpi black; the maxillary for the greater part white; both are thickly covered with white hair. Front and vertex strongly and closely punctured; the former with some transverse striae; the face is covered with white, the vertex with black, hair. Thorax black, except for an interrupted white line on the edge of the pronotum; the tubercles, a small mark below them and the scutellar

*) Manr. Memoirs xli, No. 13 p. 8.

keels which are yellowish-white. Mesonotum and scutellum shining, covered with large, rather widely separated punctures; those on the scutellum are more widely apart than those on the mesonotum. Scutellum flat, narrowed towards the apex; the post-scutellum closely punctured, except at the apex. The areola is wider than long, is obliquely narrowed towards the base; the petiolar area becomes obliquely wider towards the base; where it is fully wider than the apex of the areola; it is aciculated and irregularly punctured; the areola is irregularly rugosely striated, more strongly in the middle than at the sides; the lateral areae are coarsely, rugosely punctured; the basal on the inner half is closely, finely obliquely striated; the posterior median area is closely rugosely punctured, the base more strongly than the apex. Propleurae closely and strongly punctured; the lower part closely obliquely striated. Mesopleurae shining, distinctly, but not very closely, punctured; the base above impunctate. Metapleurae rugosely punctured; the base below the middle with some stout curved keels; the middle keels extend to the apex of the coxae. Mesosternum punctured like the mesopleurae; the furrow is deep, not much widened behind and bearing some stout transverse keels. Legs black; the fore tibiae are white in front; the hinder femora bright red, except at the apex. Abdomen black; the apical 4 segments indigo-blue; the apex of the petiole is broadly raised in the middle and is strongly and closely longitudinally striated; the gastrocoeli are large and deep; their base with 7 stout, more or less oblique, keels; the part between them is stoutly longitudinally striated; the base of the 3rd segment and of the 4th, to a less extent, longitudinally striated. The 2nd and 3rd segments are closely punctured; the 4th less strongly; the others are impunctate.

The antennae in the ♀ are stout, black; the 10th to the 17th joints are white beneath; they are covered with a white down. The wings are hyaline and strongly iridescant.

2. *C. coeruleicaudis* sp. nov. ♀. Long. 14 mm.

H a b. Khasia (Coll. Rothney).

Agrees closely with *C. nigrocoerulea*, but the blue color on the abdomen is only visible on the apical segments; the white colour on the inner orbits does not extend below the antennae; the scutellum is much less strongly punctured; the areola is longer than broad, not broader than long; the spiracular area is less closely striated and the mandibles are not yellow at the base.

Head black, except for a white line on the inner orbits

opposite the front and one in the middle behind. The face and vertex are rather strongly punctured: the punctures on the clypeus are larger, deeper and more widely separated and thickly covered with white pubescence; the face is roundly convex above; the clypeal foveae large; the sides of the clypeus are pale testaceous. Mandibles black, shining: the base closely, the centre more sparsely, punctured: the labial palpi blackish; the maxillary dark testaceous; both are thickly covered with white hair. Front and vertex strongly and closely punctured; the former with some transverse striations; the face covered with white, the vertex with black, hair. Thorax black, except for an interrupted white line on the edge of the pronotum and a mark on the middle of the scutellar keels; the mesonotum and scutellum shining; covered with large, rather widely separated, punctures; those on the scutellum being more widely apart. Scutellum flat, narrowed towards the apex; the post-scutellum closely punctured, except on the apex. The base of the median segment is finely and closely transversely striated; the areola is slightly longer than broad; its base slightly rounded, almost transverse; the apex is rounded inwardly; inside it is rough, irregularly obliquely striated; the posterior median area is closely rugosely reticulated; its top and sides stoutly striated; the striations becoming larger below; the outer areae are coarsely rugose and coarsely transversely striated below; the spiracular area transversely rugosely punctured, behind more closely and not so strongly. Propleurae shining, closely behind, in the middle, stoutly and sharply, striated; the mesopleurae shining, closely, but not strongly, punctured; the metapleurae coarsely, rugosely punctured, the punctures running into striations behind. Mesosternum punctured like the pleurae; the central furrow deep, not much widened behind and bearing stout transverse keels throughout. Legs black; the hinder femora ferruginous, except at the apex; the anterior tibiae and tarsi dirty testaceous. Wings fuscous-violaceous: the stigma and nervures black; the areolet narrowed at the top, being there scarcely the length of the space bounded by the recurrent and the second transverse cubital nervures; the recurrent nervure is received beyond the middle, almost at the base of the apical third of the cellule, Petiole smooth; the apex in the middle strongly longitudinally striated; the second segment is closely punctured, the middle, at the base, stoutly and sharply striated; the gastrocoeli smooth, impunctate; on the innerside, at the base, are 7 stout keels; the 3rd segment is less strongly and closely punctured and at the base, in the middle, bears some short, longitudinal striations; the apex of the 4th and the succeeding segments are cobalt-blue,

3, *C. nigro-coerulea* sp. nov. ♀. *Nigra*, abdomine *coeruleo*; *femoribus posticis late rufis*; *annulo flagelli antennarum albo*; *alis fusco-violaceis*; *nervis stigmatique nigris*. — Long. 15 mm.

H a b. Khasia (Coll. Rothney).

Antennae black; the 10th to 15th joints white at the sides and beneath; the scape strongly punctured. Head thickly covered with soft white hair; the inner orbits narrowly from near the hinder ocelli to opposite the base of the antennae; a small mark, near the eyes, shortly behind the hinder ocelli; the sides of the clypeus and a narrow line on the outer orbits near the middle, yellow. Face and clypeus strongly punctured; the punctures on the clypeus, especially near the apex, are longer and more widely separated; the mandibles at the base strongly punctured, broadly rufous in the front of the teeth; the palpi white, blackish at the base. Thorax black; thickly covered with short, fuscous hair; a narrow line on the pronotum, extending from close to the base to the tegulae; the outer edge of the tegulae; the base of the tubercles and of the scutellar keels and an interrupted line on the base of the pronotum, yellow. Mesonotum strongly and almost uniformly punctured; the scutellum similarly punctured, but with the punctures more widely separated; especially behind; the post-scutellum finely and closely punctured. The base of the median segment finely and closely obliquely striated laterally; the posterior median area at the base irregularly and closely transversely striated; its apex irregularly reticulated; the posterior median finely and somewhat irregularly striated; its sides with stout, distinctly separated keels, which become longer from the base to the apex of the area: the tooth-bearing area irregularly and strongly reticulated; the spiracular area at the base is punctured; the rest of it somewhat irregularly obliquely striated. Propleurae strongly punctured, the middle behind widely obliquely and strongly striolated. Mesopleurae strongly punctured, more closely above; the apex hollowed, its upper edge with a row of 6 large deep foveae, in front of which is a smooth space; the upper part of the metapleurae, at the base, finely and closely punctured, below which is a distinct hollow; the rest is strongly punctured; below the hollow are a few short striations, followed, lower down, by stouter keels, the central being the longer and stouter; and it is curved downwards at the apex, where those below become united to it. Legs thickly covered with short white hair; the apex of the fore femora and tibiae yellowish; the hinder coxae strongly punctured, yellowish at the apex behind; the posterior femora ferruginous, black at the apex. Wings fuscous-violaceous; the stigma

and nervures black: the areolet narrowed at the top, being there one half of the part bounded by the first transverse cubital and the recurrent nervure; which is received shortly beyond the middle of the cellule. Abdomen blue, with purple tinges; the petiole at the base closely, somewhat irregularly striated; the middle at the apex strongly longitudinally striolated; the sides at the apex with a few scattered punctures; the 2nd segment closely and strongly punctured; its base with 6 stout keels extending to the middle of the segment, becoming thinner as they do so; the gastrocoeli large, deep; the base with stout longitudinal keels; the 3rd segment closely punctured; the others smooth.

The ♂ has the antennae entirely black; the inner orbits from near the front ocellus; the sides of the clypeus and a somewhat triangular mark on the base of the mandibles, yellow; otherwise as in the ♀, except that all the abdominal segments are strongly and closely punctured.

6. *Lareiga*, gen. nov.

Areola open behind, slightly longer than wide; all the other areae clearly separated; the sides of the median segment with blunt teeth. Mesosternum with a curved wide furrow on either side at the base; the median segment toothed at the apex. Post-petiole slightly punctured in the middle; the other segments smooth and shining; the last segment, above and below, as long as the penultimate; the ventral keel is large and extends to the apex of the 4th segment. Gastrocoeli shallow. The upper tooth of the mandibles is much longer and more sharply pointed than the lower. Clypeal foveae large. The antennae have the basal joints of the flagellum all longer than broad. Scutellum rather flat; its sides not keeled; post-scutellum deeply depressed laterally. Metathoracic spiracles long, narrow, curved. Areolet 5-angled, narrowed at the top; the disco-cubital and the recurrent nervures have the stump of a nervure; the transverse median nervure is received distinctly in front of the transverse basal. Tarsi thickly spinose.

The antennae in the ♂ are as long as the body and are serrate towards the apex. The head is roundly, obliquely narrowed behind; the occiput is roundly incised; the apex of the median segment has an oblique slope; the post-petiole is not clearly separated, it gradually merging into the petiole; in the ♂ it is longer and narrower. There is a stout keel before the middle of the propleurae.

The distinctive characters of this genus are the areola.

longer than wide and open behind; the toothed median segment and the smooth, almost impunctate abdomen. The thorax in the known species is black, marked with yellow; the abdomen metallic blue; and the tibiae and tarsi are marked with white.

L. rufofemorata, sp. nov. ♀. *Nigra; abdomine coeruleo; annulo flagelli antennarum, coxis trochanteribusque anterioribus, tibiarum basi late, facie, linea pronoti, tegulis albis; alis hyalinis, nervis nigris.* — Long. 13 mm.

H a b. Khasia (Coll. Rothney).

Antennae black; the 10th—18th joints white beneath; the scape rufous. Head black; the face and clypeus rufous, darker in the middle; the upper side of the face next to the eyes and the upper side of the clypeus near the foveae, yellow; the lower orbits on the inner side, narrowed below, dilated in the middle to near the lower ocellus and narrowed again to near the middle and the lower part below, broadly yellow. Face and clypeus closely and strongly punctured; the vertex smooth; the front finely punctured below the ocelli. Mandibles black, rufous at the base and before the teeth; the middle punctured. Thorax black, the edge of the pronotum narrowly behind, and broader at the apex; the tubercles, tegulae, the scutellum and post-scutellum, yellow. Mesonotum almost opaque and closely punctured. Scutellum smooth. Propleurae smooth, the hinder edge, except at the top, longitudinally striated; the striae small above, coarser below. Metapleurae longitudinally striated, finely above, coarsely below. Median segment finely and closely transversely striated; the areola is a little longer than wide; the lateral keels bulge roundly outwardly; the teeth are large and stout. Legs rufous; the four anterior and the apex of the hinder coxae; the base of the tibiae broadly and the middle of the tarsi broadly, white; the base of the tibiae slightly and of their apex broadly, black; the metatarsus and the apex of the terminal joint, black. Areolet oblique, narrowed at the top; the width there being not much more than the space bounded by the recurrent and the 2nd transverse cubital nervures; the recurrent nervure is received shortly beyond the middle of the cellule. Petiole smooth, impunctate; the gastrocœli shallow, indistinct; the base finely striated; the 2nd segment finely punctured; the others almost impunctate.

The ♂ has the face and clypeus entirely yellow; the scape of the antennae is yellow beneath; on the base of the mesopleurae, at its junction with the sternum, is a somewhat triangular yellow mark,

7. *Belargea*, gen. nov.

Areola separated, twice broader than long. Sides of median segment stoutly spined. Face flat. Apex of clypeus transverse; its sides not rounded. Head obliquely narrowed behind; the occiput roundly, deeply incised and sharply margined. Scutellum roundly convex, but not much raised; its sides not keeled. Areolet 5-angled, wide at the top; the discocubital nervure has the stump of a nervure; the transverse basal nervure is interstitial. Tarsi long, spinose; the apex of the hinder femora reach near to the apex of the 4th abdominal segment. The 2nd and the base of the 3rd segments are closely punctured; the gastrocoeli are narrow and dilated at the apex.

The median segment is completely areolated. The upper tooth of the mandibles is large, narrowed and rounded at the apex; the lower is shorter and obliquely bent inwardly. The depression at the base of the median segment is wider at the base than the areola and has an oblique slope.

This genus resembles in its main features *Lareiga*. The two may be separated by the radical difference in the form of the areola: in *Lareiga* it is twice longer than broad and is open behind; in the present genus it is twice broader than long and is closed by a keel at the base. The gastrocoeli are more distinct than in *Lareiga*.

B. albomaculata, sp. nov. ♀. *Nigra; abdomine coeruleo, mesonoto mesopleurisque albo-maculatis; pedibus rufis; coxis, trochanteribus, dimidio basali tibiarnm posticarum albis; alis hyalinis, stigmatе nervisque nigris.* — Long. 16 mm.

H a b. Khasia Hills. (Coll. Rothney).

Scape of antennae yellowish beneath; the flagellum somewhat brownish. Head black; the face, clypeus, labrum, palpi, the inner eye orbits above — the band triangularly dilated in the middle — and the outer — narrowly above, broadly below —, yellow. Face and clypeus punctured and closely covered with white hair; the face more closely punctured and with the hair shorter than on the clypeus. Mandibles black; the base with a yellow mark on the top above and thickly covered with pale fulvous hair. Occiput sharply margined; the vertex impunctate, the front smooth and shining. On the thorax there is a broad line on the pronotum, a mark, broader than long, on the hinder part of the mesonotum in the middle, the scutellum, post-scutellum, except in the middle, and a large oblique mark on the lower side of the mesopleurae at

the base, yellow. Mesonotum opaque, thickly covered with short pubescence and closely punctured. Scutellum smooth, covered with long pale hair, longer than broad, rounded at the base and narrowed gradually towards the apex. On the median segment the areola is smooth and shining, rounded outwardly at the base, inwardly at the apex: it is distinctly wider than long; the basal areae are aciculated; the apical closely transversely striated; the outer more strongly than the median; the base of the spiracular area strongly aciculated; the middle closely, the apical part coarsely, transversely striated. Propleurae aciculated, the apex striated. Mesopleurae bearing shallow punctures; the base, the upper part and the middle striated. Mesosternum closely punctured; its central furrow widely and deeply depressed at the apex. The 4 anterior coxae, and their trochanters are yellow, the hinder black, except the coxae which are broadly yellow at the apex and more narrowly below; the femora rufous, black at the apex above; the 4 anterior are more or less yellowish in front; the 4 front tibiae rufous, yellowish in front; the anterior narrowly at the base, broadly at the apex, the middle in part yellow; the hinder tarsi have the basal and apical joints black; the others dull rufous. Wings fulvo-hyaline, the nervures and stigma black; the areolet at the top slightly less in length than the space bounded by the recurrent and the transverse cubital nervures; the recurrent nervure is received near the middle. The abdominal petiole is of a darker blue than the rest of the abdomen; it is shining; its middle, except at the apex, with large, deep punctures; the gastrocoeli are smooth in the middle, their apex fulvous.

8. *Odontojoppa* gen. nov.

Areola large, twice longer than wide, open behind, its apex reaching to the top of the truncation; the lateral areae are not clearly separated and are only two in number; the sides of the segment bear stout, broad spines. Labrum projecting. Clypeus not distinctly separated from the face. Scutellum roundly convex; its sides not margined. The sides of the mesosternum have a broad shallow furrow at the base. Areolet 5-angled, narrowed at the top; the transverse basal nervure is interstitial; the disco-cubital and the recurrent nervures bear short branches. Legs moderate in length; the apex of the hinder femora reaches to the apex of the 3rd segment; the tarsi are long and spinose.

(Continuation follows.)